

PUBLIC ROADS

CARING FOR COUNTRY ROADS

Heavily Loaded Wagons With Narrow Tires Are Injurious—Place Harrows on a Drag.

(By E. B. HOUSE, Colorado Agricultural College, Fort Collins, Colo.)

Excessive loads placed on wagons with narrow tires are exceptionally bad for any road. Tractors using wheels upon which are cleats, or anything that will cut through or injure the road surface should never be allowed on country roads. Disk harrows and in fact any cultivating tool should be kept off the road. If it is necessary to move them along the road, place them upon a drag, stone boat, or haul them to the field on a wagon. If dragged over the road, they will scar the road badly, break through the surface and start disintegration. No road is in such poor condition as to warrant abuse of this kind.

ITEMS OF HIGHWAY EXPENSE

Interest on Investment and Cost of Maintenance All Have Vital Bearing on Road Plans.

The following is quoted from an article by E. H. Piepmeyer, maintenance engineer, highway department, state of Illinois:

"There are three principal items of expense connected with road improvement which the engineer must impress upon the public mind before it will be possible for him to construct an economical system of roads. These factors are: The original cost of the improvement; the interest on the money invested in the improvement; and the total upkeep cost. When all of these factors are taken into consideration, it is evident that many of the cheaper types of roads, when properly maintained, will give the desired service and yet will be much more economical on account of their low first cost.

"When a type of road is selected, taking into consideration the three principles set forth above, it is very essential that provision be made for proper and efficient maintenance. If local conditions are such that maintenance may be delayed or prevented, preference should be given to a type of pavement that requires only a small amount of maintenance and which will be serviceable for a period of time even with no maintenance whatever.



Concrete Road in Suburbs of Chicago.

Neglecting proper maintenance for but one year on many types of roads is very much more serious than the amount of money involved represents. The road engineer should keep this in mind and thoroughly impress the fact upon the individuals who have a voice in the final determination of a type of road."

SOUTH IS IMPROVING ROADS

Interest Stimulated by "Drive-Aways" of Automobiles and Trucks From Northern States.

"Drive-aways" of automobiles and trucks from the manufacturing centers in the North to points south of the Mason and Dixon line has wonderfully stimulated the good roads movement in the South, writes an accessory dealer in Atlanta.

"I have traveled over considerable territory in the South of late and it is noticeable the amount of interest that has been worked up locally over road improvement by the influx of cars that from necessity had to be driven to distributors. The high price of cotton is responsible in great measure for the prosperity this section is enjoying."

WORKING FOR BETTER ROADS

Man Has Always Recognized Importance of Improved Highways for Transportation.

Ever since civilization adopted the wheel vehicle, civilized man has recognized the importance of improved roads and better vehicle transportation, and has constantly striven by individual or co-operative effort to make it easier by animal or other power to get to and from the place of production to center of consumer distribution.

Orchard Information

SELECT AND PLANT PEACHES

Only Thrifty, Well-Grown Trees, Free From Pests and Diseases, Should Be Used.

(Prepared by the United States Department of Agriculture.)

It is poor economy to buy cheap peach trees. First-grade trees cost but a few cents more than the other grades and the thrifty, rapid growth which they make offsets many times this additional expense, but even the best trees must be properly planted in order to be successful. This article tells how to select and plant the trees.

As a rule, only thrifty, well-grown, well-rooted one-year-old or "June-budded" trees free from injurious insect pests and fungous diseases should be planted. Thrifty, well-grown trees are not necessarily the largest trees which can be found in a nursery. Medium-sized trees are probably fully as desirable for planting as the larger ones, but the smaller grades in some cases may be made up of trees that are stunted and weak from some cause or other. Not infrequently they have poor root systems. The smaller trees can usually be bought at a lower price than the medium-sized and large ones, but they may prove costly in the end, especially if they are lacking in vitality and make a poor growth after being planted.

Peach trees are commonly graded according to their height. In properly grown trees, however, there is a pretty definite relation between the height and the size of the trunk or "calf" of the tree. The diameter of the stem is sometimes used as the basis for grading nursery stock. A few cents per tree of additional cost means comparatively little in the initial expense of starting an orchard, but it may mean a vast sum later in the life of the orchard in the better development of good, vigorous trees.

When received from the nursery the trees should be unpacked immediately. Every possible precaution should be taken to prevent the roots from becoming dry. Unless the trees can be planted immediately, they should be heeled in, in a thoroughly well-drained place, where the soil is mellow and deep. A trench sufficiently wide and deep to receive the roots is made; then the trees are placed in it. In covering, the soil should be worked among the roots of the trees sufficient-



Peach Trees Trimmed Ready to Plant.

ly to fill the spaces between them. This will fully exclude the air; otherwise there is danger of the roots drying unduly.

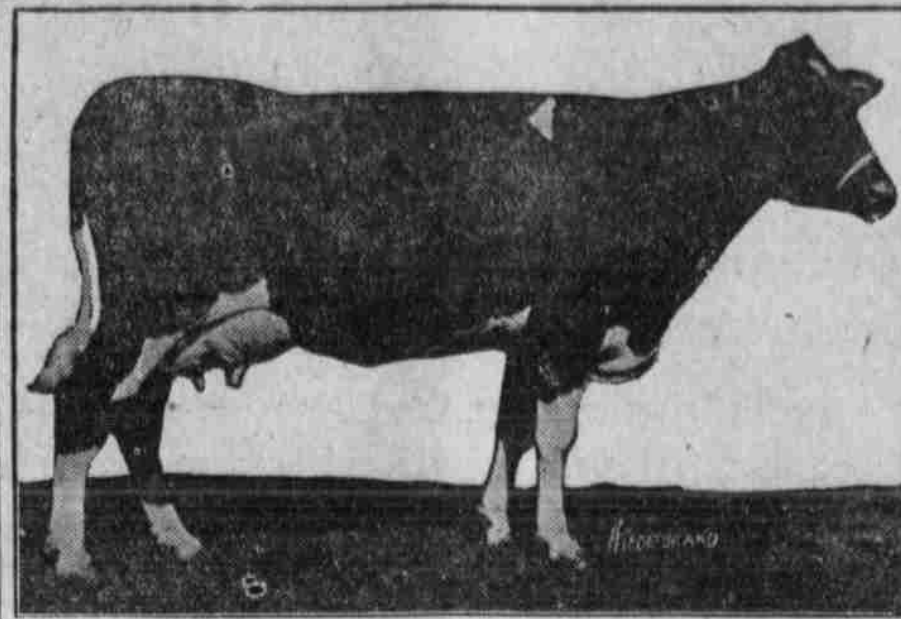
Common planting distances for peach trees are 18 by 18 feet, 18 by 20 feet, or 20 by 20 feet, requiring, respectively, 134, 121 and 108 trees per acre. Closer planting is sometimes practiced, but it is rarely advisable, and under some conditions 25 by 25 feet probably does not allow the trees more space than they need. The trees are usually planted in squares, as the above distances suggest, but the triangular system or some of its modifications is occasionally used.

Every reasonable care should be observed to plant the trees in straight rows and in perfect alignment in both directions. Trees so placed look better and can be cultivated better and more conveniently than where the rows are crooked and irregular.

In preparing a tree for planting, all portions of the roots which have been mutilated in digging the trees or injured by any other means should be trimmed off, and long slender roots, if they occur, are usually cut off to correspond with the length of the general root system.

Unless a tree is rather large the branches should all be removed, leaving only a single unbranched stem. This stem should be headed back to correspond with the height at which it is desired to form the head of the tree. The common extremes as to height of top preferred by different growers range from about 12 to 18 inches up to 24 or 30 inches.

RAG APPLE KORNDYKE PONTIAC IS NOW WORLD'S CHAMPION SENIOR 3-YEAR-OLD



RAG APPLE KORNDYKE PONTIAC.

Another forty pounder has risen in the ranks of purebred Holstein cows. Rag Apple Korndyke Pontiac is the twenty-seventh cow of the breed to yield more than forty pounds of butter in a week. Her record for the seven days is 651.8 pounds of milk yielding 41.94 pounds of butter. Inasmuch as she was three years, nine months and 27 days old at the time of her freshening she is now world's champion senior three-year-old. She just beat the previous world's record in this division by a fraction of a pound. The previous record was 41.81 pounds of butter made by Lady Pontiac Johanna.

Rag Apple Korndyke Pontiac is a daughter of Rag Apple Korndyke VIII. Her dam is Fairview Pontiac Darkness II. She is owned by Oliver Cabana, Jr., Elma Center, New York.

DEFINITE PLAN FOR PRUNING IN SEASON

Work Must Necessarily Be Done in Systematic Manner.

Where Problem Involves Management of Extensive Commercial Plantations Not Easy to Operate in Miscellaneous Way.

(Prepared by the United States Department of Agriculture.)

"Prune when your knife is sharp," used to be the advice of earlier horticulturists. This is a comparatively safe method to follow with most plants, but where the problem involves the management of extensive commercial plantations it is not so easy to prune in this miscellaneous fashion. The work must necessarily be done at some particular season and carried on in a systematic manner after some definite plan. With most orchardists and gardeners pruning can best be done during the winter or early spring months, and where the object is the removal of small branches this season is undoubtedly quite as satisfactory as any other. In fact, pruning during late spring about the time or just previous to beginning of growth, is particularly advantageous with the peach, because at that season, as a rule, all injury to the annual growth from winter killing will be apparent and the pruner can take advantage of this to remove all dead or injured branches and at the same time modify his plan so as to leave a maximum quantity of wood in order to secure a profitable crop of fruit, which might not be possible were the usual practice of removing one-half the annual growth followed in such seasons. With the apple and pear, which suffer less from winter killing, the annual pruning can as well be done in February or March, in the North, as at any other season. With the grape, however, which is likely to produce a heavy flow of sap if the pruning is delayed until late in the season, it is undoubtedly best to do the pruning during the late fall and early winter months.

There are several questions in connection with this operation which are not yet definitely settled for the different fruits. Some growers hold that late spring pruning tends to increase the fruit supply and that fall or early winter pruning increases the development of wood, particularly with the grape. But, as there are no careful records upon this point, one must necessarily be guided largely by convenience or, as in the case of the peach, climatic conditions. As a rule, it is undoubtedly best to delay pruning as late as possible where there is danger of winter killing. In other cases, where this injury is not likely to occur, it may be advantageous and equally satisfactory to prune in the late fall or early winter.

Convenience and climatic conditions must be taken into consideration in determining the period of pruning. In the removal of large branches, however, the work should be done at a season when growth is at its height, in order that the healing process may begin at once and continue as long as possible during the season in which the cut is made. For this reason it is a common practice among orchardists to remove large branches of the apple and pear about the time they come into bloom, which is also about the period of the beginning of active growth.

The same rule will hold with ornamental deciduous trees, except that the period of blooming cannot be taken as the basis. The gardener must observe the time when annual growth begins and regulate his pruning accordingly.

Guinea as Watch Fowl.

The guinea is a good watch bird. While its cry is somewhat objectionable yet this bird is the first to give warning when danger threatens the poultry flock.

SPRAY FOR ASPARAGUS BUGS

One or Two Applications of Lead Arsenate or Bordeaux Mixture Will Kill Beetles.

(Prepared by the United States Department of Agriculture.)

If beetles and larvae are at work on the foliage of asparagus plants, one or two applications of lead arsenate will kill them. Two pounds of dry lead arsenate or 4 pounds of lead arsenate paste to 50 gallons of water or bordeaux mixture will make a spray of sufficient strength. This treatment, made after the cutting season, should lessen the number of beetles next year and also enable the plants to make a healthy growth.

The common asparagus beetle is distributed over a wide territory extending from Toronto, Canada, through New York and New England, except Maine, to southern North Carolina and westward to the border line between Illinois and Iowa. It has also been reported from one locality in Colorado and three in California. The other species, the 12-spotted asparagus beetle, also known to growers as the "red" species, is not so common and somewhat less injurious. The early broods of these insects feed on the young and tender asparagus shoots and render them worthless for market. Later broods of the common species devour the foliage and frequently kill the plants, and those of the 12-spotted beetle feed on the berries.

MAKING USE OF COVER CROPS

Sometimes Limited in Particular Seasons by Lack of Moisture—Find Soil Troubles.

(Prepared by the United States Department of Agriculture.)

The use of cover crops is sometimes limited in particular seasons by lack of moisture. If there is a protracted drought at the time the seed should be put in and the trees are suffering therefrom, it might do more harm than good to make a further demand upon the moisture in the soil by sowing a cover crop, even though the soil may be known to lack humus.

In maintaining soils in a highly productive condition it is important to learn what factors are limiting the performance of the orchard. The limiting factor may be an insufficient supply of some kind of plant food, improper physical condition of the soil due to a lack of humus or poor drainage, or it may be something else. The real problem is to determine what the trouble is and then apply the proper remedy, if it is known.

BERRIES FOR HOME GARDENS

Everbearing Varieties Are Favored in Northern States Because of Their Hardiness.

(Prepared by the United States Department of Agriculture.)

Strawberries may be produced throughout the summer and autumn months in the Northern United States. Plants of the everbearing sorts may be set in the spring and a crop secured in the summer and autumn of the same year. The plants are very hardy, their foliage is very resistant to disease, and under favorable conditions they continue to produce berries until hard frosts occur. These characteristics make them especially suitable for the home garden.

DO SOMETHING FOR COUNTRY

Help Food Supply by Keeping a Few Hens in Back Yard—Start Wisely on Small Scale.

(Prepared by the United States Department of Agriculture.)

Do you want to "do something" for the food supply—meat and eggs—even if only in a small way? Keep some hens. Not a new idea, of course, but until now it never was quite so necessary or mandatory to grasp every food-making opportunity. Try it in the back yard, beginning wisely on a small scale—say ten hens.

POULTRY



UP-TO-DATE POULTRY HOUSE

Modern Structures Are Built With Idea of Giving All the Fresh Air That Is Possible.

(Prepared by the United States Department of Agriculture.)

Modern methods of poultry housing make due allowance for the capacity of birds to withstand low temperatures and for the advantage of ample ventilation in the poultry house. Except in extreme northern sections, or



Plain Poultry House for Small Flock.

for breeds of fowls having very large combs, it is no longer considered necessary to build houses so substantially that when they are closed the cold is excluded and the temperature in the house appreciably raised by the heat from the bodies of the birds.

The system of tight, warm houses once very popular was based upon the idea that to have hens lay in cold weather they must be kept in houses where water would never freeze. The methods of housing now most widely approved and used are based upon the experience of many poultry keepers that egg production is more stable and the hens keep in much better condition when the house is built and used with a view to giving all the fresh air that can be given without exposing the birds to a temperature that will frost their combs. It has been found that the combs of hens accustomed to low temperature become frost resistant to a remarkable degree, and the birds themselves much less subject to colds than when an effort is made to keep the houses warm as is practical.

Except when the winters are long and severe, hens may be kept comfortable and productive in a house of the lightest durable construction, provided the house has a water and wind-tight roof, rear and end walls, and a front which can be opened as much as is necessary to give thorough ventilation, or closed as much as is necessary to keep out rain or snow.

For ventilation in summer it is advisable and often necessary to have apertures in the rear wall or in the ends—toward the rear, which can be closed perfectly tight in winter and opened as much as required at other seasons.

INCREASE OF POULTRY URGED

Appeal Made to City and Country People Alike to Help the Meat and Egg Supply.

(Prepared by the United States Department of Agriculture.)

Owners of back yards in cities and towns are asked to do everything in their power to help the meat and egg supply by raising small flocks of poultry in back yards. Farmers are requested greatly to increase their farm flocks or hens so that 100 on every farm will be the average for the nation.

The following statement regarding the poultry needs is taken from the official agricultural program for 1918 issued recently by the United States department of agriculture:

"Poultry production should be increased greatly, especially in back yards and on farms where waste material is available and the purchase of expensive grains and other material is not required.

"Increased poultry production may be attained most economically by early hatching; by confining mother hens at least ten days after the chickens are hatched; by reducing losses on account of rats, weasels, and thieves, and from cold, damp conditions; by thorough sanitation; by discouraging the marketing of early-hatched pullets as broilers; by eliminating nonproducing hens and keeping good layers through at least two laying seasons; and by the poultryman raising his own feed as far as possible."

HEAD LICE ON YOUNG CHICKS

Where Pests Are Discovered Head and Throat Should Be Well Greased With Pure Lard.

One great trouble with young chicks is head lice, with which they are apt to be infested. A thorough examination of the head and throat of every chick a day or two old should be made, and if any of them are found to be infested give the head and throat of the whole brood a thorough greasing with pure lard, which will put an end to the lice.

EXPERT'S TRIBUTE TO WESTERN CANADA SOIL

That there is good reason for the wonderful crops of grain grown in Western Canada, which have made thousands of former residents of the United States wealthy, is not always given the thought that it deserves is quite apparent. But that there must be a reason is quite evident. Probably more than one—but the one that requires emphasis—is that the soil is of the nature that will produce good crops. It was not long since that the farmer selected his land in the most haphazard way. He need not do so today. He will select it on the soil analysis plan. Soil from Western Canada was submitted to Prof. Stevens, soil physicist of the State College of Washington, at Pullman, Wash. His report should no doubt further encourage settlement in Western Canada. It reads as follows:

"We have analyzed this sample and find that it runs high in lime, very high in potash, phosphorus and in nitrogen; that it has a splendid supply of organic matter and is in the best of physical condition. There is nothing wrong with this soil from the standpoint of crop production, and I am satisfied that it will give splendid results wherever put under cultivation."

It is soil like this properly worked, and on scientific lines, as is the rule today, that gives the opportunity to quote the experiences of farmers who have increased their incomes from \$500 to \$30,000 in two seasons, and whose story would read as follows:

"I have threshed altogether 7,000 bushels of No. 1 Northern wheat from 200 acres, which went from 24 to 56 per acre—so breaking 24, spring plowing 36, back setting 56 bushels—the average being 35 bushels per acre."

The newspaper giving an account of this man's experience says: "When he disposed of his 1,000 acres from north of Brooks, Alta., to four Oak Harbor men, he was worth \$30,000. Two years ago he came here with \$500 and a few horses."

It is the soil of Western Canada, and the knowledge of what it will do that brings to Canada the hundreds of settlers that are daily arriving at the border. A growing enthusiasm for the fertile prairie lands of Western Canada is spreading all over the continent. This enthusiasm is the recognition of the fact that sufficient food could be produced on these prairie lands to feed the world. From the south, east and west, hundreds of men, too old for military service, are pouring into Western Canada to take up land or to work on the farms. A great many of the incoming settlers have arrived at such central points as Calgary, Edmonton, and Lethbridge, Alberta, and at Regina, Moose Jaw, and Saskatoon, Saskatchewan. Judging from the bulk of their household effects, the number of their horses and cattle, and the quantity of implements they are bringing with them, most of the new arrivals also seem well blessed with the world's goods.

Reports from North Portal, Saskatchewan; Coutts, Alberta, and Kingsgate, British Columbia—the principal gateways into Western Canada from the United States—indicate that the present influx of farmers is in such volume as has not been witnessed for many years. From Vancouver, British Columbia, people are going to the prairies for summer farm work, many with the intention of taking up land themselves at the end of the summer.

The influence of this tide of farmer settlers on greater food production will be more readily appreciated when it is considered that the average settler takes up at least twice as much land as he has hitherto been farming—and land which, acre for acre, produces better and larger crops.—Advertisement

Bigamous Wish.

A visitor to the household of a colored man in Georgia was much impressed by the thriftiness of the mistress of the house.

"That's a hard-workin' wife you've got, Joe," said he.

"Yes," said Joe, with the utmost gravity, "I wish I had a couple more like her."—Harper's Magazine.

FRECKLES

Now Is the Time to Get Rid of These Ugly Spots

There's no longer the slightest need of feeling ashamed of your freckles, as Othine—double strength—is guaranteed to remove these homely spots.

Simply get an ounce of Othine—double strength—from your druggist, and apply a little of it at night and morning, and you should soon see that even the worst freckles have begun to disappear, while the lighter ones have vanished entirely. It is seldom that more than one ounce is needed to completely clear the skin and give a beautiful clear complexion.

Be sure to ask for the double strength Othine, as this is sold under guarantee of money back if it fails to remove freckles.—Adv.

Crash Went the Picture.

He (hanging small pictures)—Any thumb tacks in the house?

She—No, dear. Will finger nails do?—Boston Transcript.

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